

REMARKS

The applicants have given the Office Action mailed June 4, 2003 careful consideration. Claims 1-6 remain in the application and claims 7-24 have been added. Reconsideration of the application is hereby respectfully requested.

The Office Action

Claims 1-6 were rejected under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 5,603,413 to Mitchum, Jr. in view of U.S. Patent No. 3,778,214 to Wyeth, et al.

The Present Application

The present application relates to an apparatus and method for inspecting multi-layer plastic containers or other items. More particularly, one embodiment of the invention relates to an apparatus and method whereby optical energy absorbing compounds are added to materials which comprise the layers of the item to facilitate inspection thereof. The invention allows for determination of attributes of each of the layers by virtue of individual layers containing optical-absorbing compounds that act in the near IR, or non-visible, wavelength range. In this way, individual layers can be inspected based on a variety of different criteria. In at least one embodiment, the inspections are accomplished simultaneously while the item under inspection, and its multiple layers, are disposed within an inspection zone of a machine vision system.

The Cited Art

The Mitchum patent relates to a method and apparatus for sorting plastic items. The system of the Mitchum patent is directed generally to plastic recycling and, more specifically, relates to the separation of mixtures of colored and clear transparent articles made of the same plastic. Notably, Mitchum does not fairly disclose any special treatment of multi-layer plastic containers. This, of course, is recognized by the Examiner in the Office Action.

The Wyeth patent is cited by the Examiner for its teaching of a container having a plurality of polymer layers.

The Claims Patentably Distinguish Over The Cited Art Of Record

The Examiner rejected claims 1-6 under 35 U.S.C. §103(a) as being unpatentable over the Mitchum, Jr. patent in view of the Wyeth patent. However, the suggested combination does not render the claims 1-6, nor new claims 7-24, obvious.

First, the Mitchum and Wyeth patents are not combinable. Mitchum teaches a system for sorting bottles that are processed for recycling. Wyeth simply teaches that multi-layer bottles exist. One of skill in the art attempting to implement the system of Mitchum would not look to Wyeth to determine the manner in which multiple layers in a bottle can each be inspected by using optical-absorbing additives and near IR radiation. The disclosure of the Mitchum patent relates to a sorting mechanism while Wyeth's disclosure relates to an apparatus for forming a bottle.

Even if the teachings of the two cited patents were somehow combined, the resultant combination would not render the present claims obvious. Specifically, even if the containers having multiple layers were sorted in the Mitchum system, only the color of the containers, i.e., of the combination of the layers, would be detected and sorted by the system of the Mitchum patent. Neither patent, alone or in combination, teaches the determining of attributes of individual layers of an item.

Independent claims 1, 4, 15 and 24 all include a recitation of the determination of attributes of individual layers of an item. This feature is not shown nor fairly taught by the suggested combination. Therefore, independent claims 1, 4, 15 and 24, and all claims dependent thereon, are not rendered obvious by the combination. Therefore, all claims are now in condition for allowance.

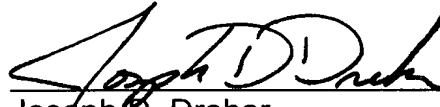
CONCLUSION

In view of the foregoing amendments and comments, all claims are submitted to be in condition for allowance. Early notification of such allowance is hereby respectfully requested.

Respectfully submitted,

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